Vol. 167 CARBOHYDRATE RESEARCH SEPTEMBER 15th, 1987

CONTENTS

(Abstracts/contents lists published in: Chem. Abstr.; Curr. Contents; Phys. Chem. Earth Sci., Life Sci.)

G.l.c.-m.s. of partially methylated and acetylated derivatives of 3-deoxy-2-ketoaldonic acids and 3-deoxyalditols
A. TACKEN, H. BRADE (Borstel, F.R.G.), P. KOSMA (Vienna, Austria), AND D. CHARON (Châtenay-Malabry, France) 1

Relationship between circular dichroism and structure of acetyl derivatives of deoxypyranoses
P. SALVADORI, C. BERTUCCI, D. PINI, AND G. ZULLINO (Pisa, Italy) 9

^{13}C-N.m.r. spectra of some acyclic perbenzoylated carbohydrate derivatives
N. B. D'ACCORSO AND I. M. E. THIEL (Buenos Aires, Argentina) 19

Kinetics of oxidation of monosaccharides with cerium(IV)
P. O. I. VIRTANEN, R. LINDROOS, E. OIKARINEN, AND J. VASKURI (Oulu, Finland) . . 29

Artificial antigens. Synthesis of polyacrylamide copolymers containing 3-deoxy-D-*manno*-2-octulopyranosylonic acid (KDO) residues
P. KOSMA, J. GASS, G. SCHULZ, R. CHRISTIAN, AND F. M. UNGER (Vienna, Austria) . 39

Syntheses of (2-nitrovinyl)amino sugars and 2- and 3-(alditol-1-yl)-4-nitropyrroles
A. GÓMEZ-SÁNCHEZ, F.-J. HIDALGO, AND J.-L. CHIARA (Seville, Spain) 55

Synthesis of heparin fragments: a methyl α-pentaoside with high affinity for antithrombin III
M. PETITOU, P. DUCHAUSSOY, I. LEDERMAN, J. CHOAY (Paris, France), J.-C. JACQUINET, P. SINAŸ (Orléans, France), AND G. TORRI (Milan, Italy) 67

Synthesis of 9-*O*-acyl- and 4-*O*-acetyl-sialic acids
H. OGURA, K. FURUHATA, S. SATO, K. ANAZAWA, M. ITOH, AND Y. SHITORI (Tokyo, Japan) 77

Derivatives of 6-amino-6-deoxy-D-galactose
P. GRIES, H. KRISTEN, AND C. VOGEL (Rostock, G.D.R.). 87

A simple strategy for changing the regioselectivity of glycosidase-catalysed formation of disaccharides
K. G. I. NILSSON (Arlöv, Sweden) 95

The rearrangement of mono-*O*-isopropylidene derivatives of aldose diethyl dithioacetals
T. B. GRINDLEY AND C. WICKRAMAGE (Halifax, NS, Canada) 105

Synthetic routes to *N*-(1-deoxy-D-fructos-1-yl)amino acids by way of reductive amination of hexos-2-uloses
D. J. WALTON, J. D. MCPHERSON, T. HVIDT, AND W. A. SZAREK (Kingston, Ont., Canada) 123

Synthesis of 2-acetamido-2-deoxy-4-*O*-(2-*O*-methyl-β-D-galactopyranosyl)-D-glucopyranose (*N*-acetyl-2′-*O*-methyllactosamine)
S. A. ABBAS, C. F. PISKORZ, AND K. L. MATTA (Buffalo, NY, U.S.A.) 131

[2 + 2] Cycloaddition of trichloroacetyl isocyanate to glycals
M. CHMIELEWSKI AND Z. KAŁUZA (Warsaw, Poland) 143

(Continued overleaf)

(contents continued)

Alternative syntheses and related n.m.r. studies of precursors for internal β-D-galactopyranosyl residues in oligosaccharides, allowing chain extension at O-4
P. KOVÁČ (Bethesda, MD, U.S.A.) AND R. B. TAYLOR (Columbia, MO, U.S.A.) . 153

Synthesis of crystalline derivatives of 3-deoxy-D-*gluco*-heptofuranose
L. O. JERONCIC, A. FERNANDEZ CIRELLI, AND R. M. DE LEDERKREMER (Buenos Aires, Argentina) 175

The reaction of 2-hydroxyglycal esters with alcohols in the presence of *N*-iodosuccinimide, stereoselective synthesis of α anomers of alkyl 3-deoxyhex-2-enopyranosides and 3,4-dideoxyhex-3-enopyranosid-2-uloses
O. VARELA, G. M. DE FINA, AND R. M. DE LEDERKREMER (Buenos Aires, Argentina) . 187

Total synthesis of X hapten, III^{3}Fucα-nLc$_4$ Cer
S. SATO, Y. ITO, T. NUKADA, Y. NAKAHARA, AND T. OGAWA (Wako-shi, Japan) . . 197

Detection of D-glucose-derived pyrrole compounds during Maillard reaction under physiological conditions
F. G. NJOROGE, L. M. SAYRE, AND V. M. MONNIER (Cleveland, OH, U.S.A.) . . . 211

Unit structure of the anti-complementary arabinogalactan from *Angelica acutiloba* Kitagawa
H. KIYOHARA, H. YAMADA, AND Y. OTSUKA (Tokyo, Japan) 221

Studies of the molecular core of *Grevillea robusta* gum
S. C. CHURMS AND A. M. STEPHEN (Rondebosch, Republic of South Africa) 239

Bacteriophage-associated lyase activity against *Klebsiella* serotype K64 capsular polysaccharide
N. RAVENSCROFT, A. M. STEPHEN, AND E. H. MERRIFIELD (Rondebosch, Republic of South Africa) 257

Mannoglucogalactans from the cell walls of *Penicillium erythromellis:* isolation and partial characterisation
P. RUPEREZ AND J. A. LEAL (Madrid, Spain) 269

Klebsiella serotype K39: structure of an unusual capsular antigen deduced by use of a viral endoglucosidase
A. N. ANDERSON, H. PAROLIS (Grahamstown, South Africa), G. G. S. DUTTON, AND D. M. LEEK (Vancouver, B.C., Canada) 279

Notes

G.l.c.-m.s. of methylated derivatives of 3-deoxy-2-ketoaldonic acid phosphates
H. BRADE, H. MOLL (Borstel, F.R.G.), S. R. SARFATI (Paris, France), AND D. CHARON (Châtenay-Malabry, France) 291

Isolation and identification of a rhamnosyl-rhamnosyl-3-deoxy-D-*manno*-octulosonic acid trisaccharide from the lipopolysaccharide of *Acinetobacter calcoaceticus* (10303 NTCC London)
H. BRADE, A. TACKEN (Borstel, F.R.G.), AND R. CHRISTIAN (Vienna, Austria) . . 295

Conformation of some benzoylated aldononitriles and 5-(polybenzoyloxyalkyl)tetrazoles as determined by their ^{1}H-n.m.r. spectra
N. B. D'ACCORSO AND I. M. E. THIEL (Buenos Aires, Argentina) 301

Synthesis of (+)-1,5-dideoxy-1,5-imino-D-galactitol, a potent α-D-galactosidase inhibitor
R. C. BERNOTAS, M. A. PEZZONE, AND B. GANEM (Ithaca, NY, U.S.A.) 305

(Continued on facing page)

(contents continued)

(3*R*,4*R*,5*S*)-5-Acetamido-3,4-piperidinediol: a selective hexosaminidase inhibitor
R. C. BERNOTAS AND B. GANEM (Ithaca, NY, U.S.A.) 312

New synthetic immunomodulators combining a 4-*O*-phosphono-D-glucosamine derivative related to bacterial lipid A with 1-deoxy-*N*-acetylmuramoyl dipeptide analogs
Y. FUJISHIMA, K. KIGAWA, Y. OGAWA, M. KISO, A. HASEGAWA (Gifu, Japan), H. ISHIDA, AND I. AZUMA (Sapporo, Japan) 317

Preliminary communications

Stereocontrolled, total synthesis of α-D-GalA-[(1→4)-α-D-GalA]$_6$-(1→4)-β-D-GalA-1→OPr, a synthetic model for phytoalexin elicitor-active oligogalacturonic acids
Y. NAKAHARA AND T. OGAWA (Wako-shi, Japan) C1

The effect of high pressure on glycosylation under Helferich conditions
N. K. KOCHETKOV, V. M. ZHULIN, N. M. MALYSHEVA, E. M. KLIMOV, AND Z. G. MAKAROVA (Moscow, U.S.S.R.) C8

Determination of the qualitative host–guest geometrical relationships in cyclomaltohexaose inclusion-complexes on the basis of measurements of intermolecular proton nuclear Overhauser effects
Y. YAMAMOTO, M. ONDA, M. KITAGAWA, Y. INOUE, AND R. CHÛJÔ (Tokyo, Japan) . C11

Author index C17

Subject index C19